EFFECTIVENESS OF JACOBSON PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF STRESS AMONG POLICE AT SELECTED BATTALION IN THIRUNELVELI DISTRICT

A DISSERTATION SUBMITTED TO THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTAL FULFILMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING.

APRIL - 2016

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

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APPROVED BY DISSERTATION COMMITTEE ON : 23.12.2014

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Bonafied Certificate

This is to certify that the dissertation entitled **"A study to assess the effectiveness of Jacobson Progressive Muscle Relaxation Technique on the level of stress among police at selected battalion in Thirunelveli District"** is a bonafied work of **Mrs. G. Dhony II year M.Sc Nursing, Sree Mookambika College of Nursing, Kulasekharm** under the guidance **of Mrs. Jaya Mehala, M.Sc(N), Asst. Professor, Department of Mental Health Nursing, Sree Mookambika College of Nursing,** in partial fulfillment of the requirement for the degree of Master of Science in Nursing under the Tamilnadu Dr. M.G.R. Medical University, Chennai.

Place : Kulasekharam

Date :

Sree Mookambika College of Nursing

Kulasekharam.

Declaration Certificate

I hereby declare that the present dissertation titled **"A study to assess the effectiveness of Jacobson Progressive Muscle Relaxation Technique on the level of stress among police at selected battalion in Thirunelveli district"** is the outcome of the original research work undertaken and carried out by under the guidance of **Mrs. Jaya Mehala, M.Sc(N), Asst. Professor, Department of Mental Health Nursing, Sree Mookambika College of Nursing, Kulasekharam**. I also declare that the material of this has not formed in anyway, the basis for the award of any degree or diploma in this University or any Universities.

Place : Kulasekharam

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INVESTIGATOR

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Abstract

Stress is a multi dimensional phenomenon which is focused on dynamic relationship between the individual and the environment. Police profession is generally perceived as a stressful and demanding profession. It is both physically and psychologically challenging. A police is exposed to a variety of stress in his day life medium level of depersonalization to high level of emotion exhaustion. The main objectives of the study was to assess the effectiveness of JPMR on the level of stress among police. The research design selected for the study was non-equivalent pre test and post test control group design. A purposive sampling techniques was used to obtain sample of 60 Police (30 in experimental group and control group); who satisfied the inclusion criteria. The tool used for the study was modified police stress scale. Pretest was conducted in the police on the first day and second day JPMR was provided. Post test was conducted to the group was done by Modified Police Stress Scale. Ethical aspect of this study maintained throughout the study. The data were analyzed using descriptive and inferential statistics. The study findings reveals that among experimental group the mean pre-test score was 33.16 with standard deviation with 7.6. For control group the mean post-test was 5.5 with standard deviation 11.08. The mean difference was 27.66. The obtained 't' value was 13.73, where as the table value was 2.04. It was significant at $p< 0.05$ level. The study concluded that JPMR was highly effective in reducing of stress among Police.

Key word : Stress, Police, JPMR.

CHAPTER - I

Introduction

"Mental Calmness is a Natural Result of Physical Relaxation"

- Edmud Jacobson

Stress is the emotional and physical strain caused as a result of our response to what happen around us.

Stress is a multidimensional phenomenon which is focused on dynamic relationship between the individual and the environment. It is also defined as a stressor, individual's response to the stimuli and interaction between the individual and the environment. It should be noted that some degree of stress can be effective on increasing and improving individual performance. Evidences indicated in stressful conditions, but high rate of stress would followed by numerous, sleep disorders, restlessness, irritability, forgetfulness, abnormal fatigue, reduced individual's resistance and recurrent infection, headaches, poor concentration memory impairment and reduce in problem solving ability (Wikipedia the free encyclopedia 2015).

Police profession is generally perceived as a stressful and demanding profession. It is both physically and psychologically challenging.

Job burnout, depression, substance abuse marital problem and suicide have been suggested as reaction to stress in the lives of policeman. (Anshel et al 2000)

A police is exposed to a variety of stress in his day to day life medium level of depersonalization to high level of emotion exhaustion.

Stress is observed to be varying with other organizational variable such as structural procedural and contextual factors.

Eg:- Administrative support of police, Quality of police promotion or leadership, inter professional conflicts, constantly changing technology or organizational restructuring.

In a review of 68 articles on police role stress, state that the most frequently indentified stressors were work load, role conflict, ambiguity, and lake of support from management and senior officer (Han cock et al 2005).

Research has found that policemen who have difficulties coping with stress exhibit maladaptive behavior and personality traits such aloofness depersonalization, suspiciousness and excessive use of alcohol (Davidson et al 1993).

Progressive muscle relaxation therapy is a systematic therapy for managing stress and achieving a deep state of relaxation. That has been effectively used to control stress and anxiety relive insomnia and reduce symptoms of the stress. It is an effective and widely used strategy for stress relief with regular practice progressive muscle relaxation therapy give a complete relaxation (Dr. Edmud Jacobson 1930- 1975).

NEED FOR THE STUDY

WHO reports 50% employees in India Including police are under stress 30% have problems of marital discord, 20% suffer from depression and 49% of people under stress say they suffer from work load. UNESCO says over 50% of policeman brought up in stressful conditions worldwide. Globally 1out of every 10 policeman suffers significant distress. Over all 50% of employee lost work days across the world

are due to stress. NIMHANS study says 36% professional police in Bangalore show signs of psychiatric disorder due to Job related stress (2010).

Indian occupational police stress (IOPS) study findings demonstrate that police work by itself can seriously affect the health of officer(John violanti et al 2013)

A study to evaluate the reason leading to stress among policeman in Tuticorin district in Tamilnadu. “The study finding shows that 95% stress due to physical, Mental and inter personal relationship of police personnel. Evidenced from the health and safety executive suggest that 20% of worker feel very or extremely stressed at work with the proportion rising to 49% in some occupational group (M. Sekar et al 2013).

Police professional have multiple responsibilities. Continues working in the public vigilance – No personal space, uncertainty, Insecurity, Anxiety, Stress, lack of confidence, lack of appraisal and reward, over burden of workload, time bound task, administrative responsibilities , total responsibilities of the police and job of the other professionals (Derek Bryan et al 2013).

Occupational Hazards- long hours shift duty, ever changing role, work with hazardous, No legal protection , one mistake can spoil Job, Job insecurity. Added by family responsibility, Transportation, social and religious responsibility no support from superior or coworker, less promotional opportunity, combined effect of all that hazard on health and alternatively fall in sickness, most police suffers from disease of the stress and anxiety. Thus stress is in the blood of police profession (Karickh et al 2011).

When compared to the other occupation police job is considered highly stressful. Stress is an integral part of the life of a professional police officer. Police offen encounter stressful situation in their daily work and there stressor have cumulative effect. (Maynard et al 1980)

Evidence Based complementary and alternative medicine for the Twenty – first century that progressive muscle relaxation is a type of therapy used to help police control the level of tension in their muscles. Proponents of progressive muscle relaxation claim it is beneficial for the treatment of several physical and mental health conditions policemen are doing their work by standing prolonged time and there is chance for developing muscle weakness. So Jacobson progressive muscle relaxation technique is effective to reduce the muscle weakness. These therapeutic theorists speculate that muscular tension is a leading cause of most physical and mental ailments. While this notion is treated with scientific skepticism, there are a number of positive benefits that the technique can offer. (Jose Rojan D'Almedia et al 2013)

Palak Patel et al (2015) conducted a quasi experimental study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara city. The study sample were selected by using non probability convenient sampling. The sample size was 30 staff nurse from selected hospitals of Vadodara city. Data was collected by stress assessment scale. The study finding reveals that 53.3% Nurses had moderate stress, 40.0% had mild stress 6.7% had severe stress as evidenced by pretest score 73.3% nurses has mild stress and no stress 26.7% as evidenced by post test score. The study concluded that progressive muscle relaxation therapy is effective in reducing the stress level of the staff nurses.

From the above studies and reports we can understand the necessary of the well conventional study / research to knowing the effectiveness of Jacobson progressive muscle relaxation strategy in reducing stress among policeman.

STATEMENT OF PROBLEM

The study to assess the effectiveness of Jacobson progressive muscle relaxation technique on the level of stress among police at selected battalion in Thirunelveli District.

OBJECTIVE OF THE STUDY

- To assess the pretest level of stress among police in experimental and control group.
- To assess the post test level of stress among police in experimental and control group.
- To determine the effectiveness of Jacobson's progressive muscle relaxation in the level of stress within experimental and control group
- To find out the association between level of stress with selected demographic variables such as Age, Sex, Education, Marital status, Income, Place of the residence, Year of service.

HYPOTHESIS:

H_1 : There is a significant difference in the level of stress among policemen in experimental group after intervention

H_2 : There is a significant association between the level of stress and selected demographic variables.

OPERATIONAL DEFINITION:

Effectiveness:

In this study effectiveness refers to reduction in the level of stress among the police after administration of Jacobson progressive Muscle relaxation techniques evidenced by the mean pretest and post test score.

Jacobson Progressive Muscle Relaxation Technique

In this study Jacobson progressive Muscle relaxation technique refers to application of tension and relaxation to all the muscle groups progressively to create a deep sense of calmness which is practiced twenty minutes for seven sessions in alternative days.

Stress

In this study stress refers as a physical or mental response to events that caused bodily or mental tension.

Police

It refers to the member of police force, to regulate, control or keep in order by means of police or similar force.

VARIABLES

Independent Variable : Jacobson progressive Muscle relaxation technique

Dependent Variable : Stress

Demographic Variable : Age, Sex, Education, Marital status, Income, Place of residence, Year of Service.

ASSUMPTIONS

- Stress is a major problem existing among the police.
- Jacobson's progressive muscle relaxation technique will be effective in reducing stress among police.

DELIMITATIONS

1. The study was conducted among Police only.
2. The study was conducted in only one Police battalion
3. The study was conducted only with 60 police.

Ethical clearance

The proposed study was conducted after the approval of the college research and ethical clearance committee. The permission to conduct study was obtained from the Medical department of Sree Mookambika Medical College Hospital and director of the institution and assurance of confidentiality was given to the subject and oral consent was taken.

CONCEPTUAL FRAMEWORK

The investigator adopts Modified Imogene King's Goal Attainment Theory (1981) based on the personal & interpersonal system including interaction, perception, judgment, communication and transaction.

The investigator adopted goal attainment as a basic theory for conceptual framework, which is aimed at effectiveness of progressive muscle relaxation therapy on level of stress. This involves interaction between the researcher and the policemen.

SIX MAJOR CONCEPTS DESCRIBE THE PHENOMENA

Perception

It refers to peoples representation of reality. Here the researcher and the police perceived the need of progressive muscle relaxation therapy to reduce the level of stress.

Judgment

Judgment is decision which is made. Here the researcher decides to provide therapy (progressive muscle relaxation therapy) to reduce the level of stress and police decide to participate in the research study.

Action

This refers to the changes that have to be achieved. The researcher action is to provide progressive muscle relaxation therapy to reduce the level of stress and police

residents decided to receive the JPMR (Jacobson Progressive Muscle Relaxation Therapy).

Reaction

Reaction helps in setting a mutual goal. In this study the researcher and police set a mutual goal. Here the mutual goal is reduction in level of stress.

Interaction

If refers to the verbal and nonverbal communication between two or more individual who involve goal directed perception. Here the researcher in the selected police battalion to receive the progressive muscle relaxation therapy to reduce the level of stress. Return demonstrate & practice JPMR for 7 days.

Transaction

This is the achievement of a goal. Here the researchers goal is achievement of the reduction in level of stress and evaluate the effectiveness of therapy by Jacobson progressive muscle relaxation using structured interview schedule.

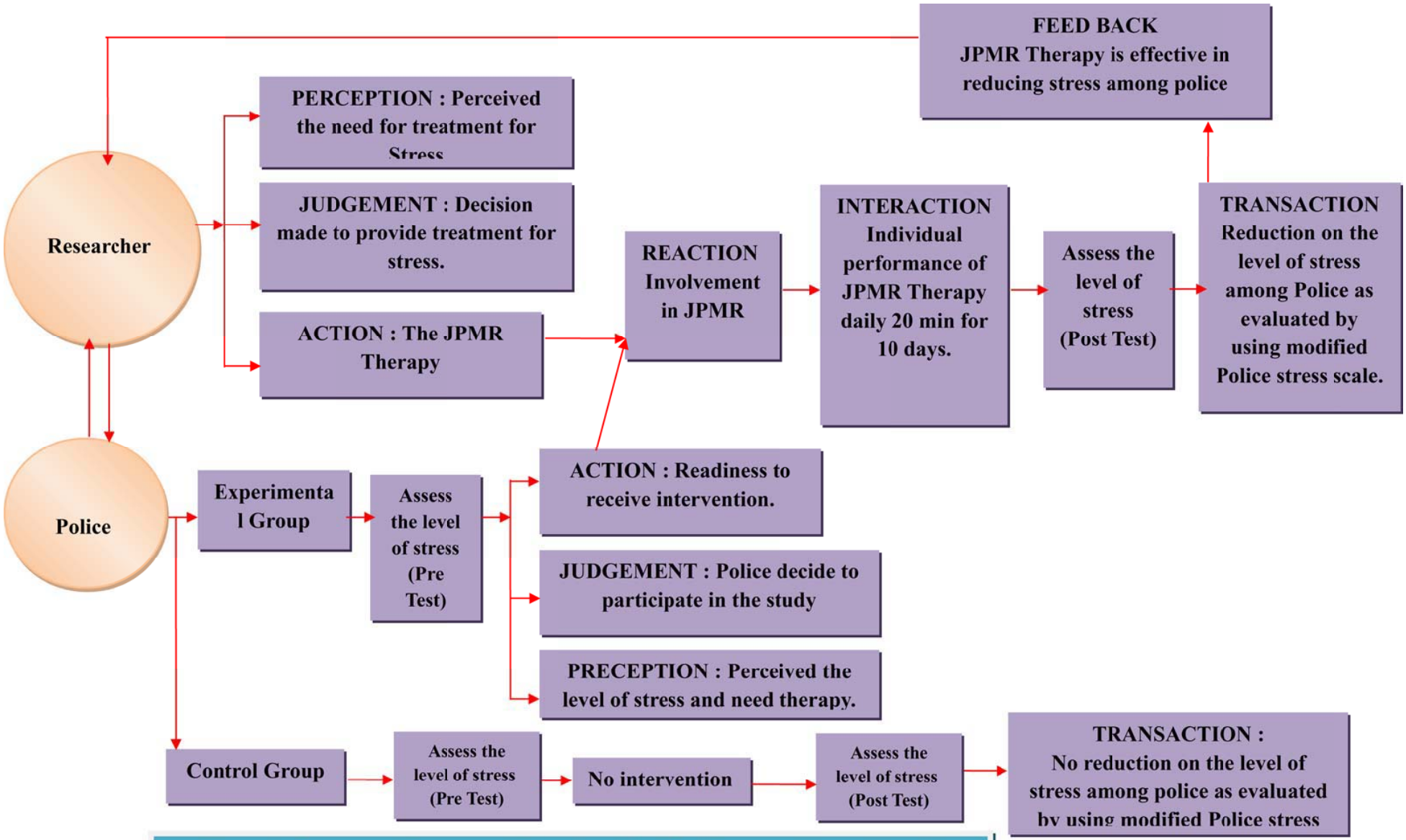


Figure 1 : **Conceptual frame work Boased on Modified Imogene king goal model**

Figure 1 : **Conceptual frame work Boased on Modified Imogene king goal model**

CHAPTER - II

Review of Literature

Review of literature is very essential for every investigator to update the information about the literature related to his/her own problem already done by other. Review of literature is considered as the most important pre-requisite to actual planning and conduct of the study. [Sharma.s.k.1990]

Review of literature for the present study has been organized under the following headings.

- Studies related to stress among police.
- Studies related to effectiveness of Jacobson progressive muscle relaxation technique.
- Studies related to effectiveness of Jacobson progressive muscle relaxation technique on stress

Studies Related to Stress among Police

Bengt B et al (2015) conducted an experimental study to assess the effectiveness of prevention program for work related stress among urban police officer at Swedish cities. The 37 sample was recruited by random sampling method. General health questionnaire tool was used in this study. The study finding revealed that the training associated with an 4.1 (95% C1, 1.3 – 13.7: $P<0.05$) for improved. The study concluded that intervention group improved their general health and problem based coping as compared to the control group. Preventive program

(relaxation therapy) training in first responders night contributes to enhanced resiliency.

Rashmi Ram Hunnur et al (2014) Conducted an empirical study to assess the effect of work place stress among police. Personnel in 4 district of Karnataka ie, Bagalkot, Bijapur, Belgaum and Dharwad. The sample size were recruited by purposive sample technique. Occupation stress scale was used in this study. The study finding reveals that the mean score is higher than cut off score i.e (role ambiguity (40%) responsibility (28%) and low status (20%)). The study concluded that the police personnel are causing high stress in police department.

Anantharaman R.N. et al (2013) conducted a community study to assess the source of job stress in police work in a developing country. The sample size was 220 police personnel were recruited using random sampling method. The police stress inventory was used in this study. The study result revealed that stress was due to more organizational factor than to physical hazard on the job. The study concluded that the effort should be made by police administration to take connective measures such as changes within organization and improving training programs.

Ravneet Kaur et al (2013) conducted a study to assess, personality and coping in police personnel at vizianagram town, Andhra Pradesh. The sample 150 were recruited by using purposive sampling General health Questionnaire, Eysenck's per scnality Questionnaire and coping checklist – 1 were used in this study. The study findings reveals that total of 53 persons (35.32%) were marked as "cases meant people suffering from high psychological stress" the 97 persons (64.66%) were marked as "non cases" group 35.55% (n=48) of the males found to have high

psychological stress. The study concluded that police personnel with high neuroticism or psycholicism traits were more likely to suffer from high psychological stress.

Collins P.A. and A.C.C. Gibbs (2012) conducted a cross sectional questionnaire survey to examine prevalence and severity of stress related symptoms among police officer at U.S.A. The sample size was 1206 police officer were selected by Randomized method. The tool used was General Health Questionnaires (GHQ). The study finding revealed that Ranking both personal and occupational stressor more highly and from personality constraint appeared significantly more "stress prone". The study concluded that work load as the key issues in stress among police officer.

Shunmuga sundaram M. and Jeya Kumaran M. (2012) conduced a descriptive study on frequency of stress among female police constables at Tamilnadu police department in India. The sample size was 150 grade III constables were recruited by purposive sampling. A standardized stress questionnaire were used in this study. The study finding reveals that the frequency of stressful event faced by grade III police constables and stress coping strategies used by them. The study concluded that Grade III police constables about the stressful event and because of their experience they are following positive stress coping strategies.

Selokar D. et al (2011) conducted a cross-sectional study on occupational stress among police personnel of Wardha city, India. The sample size is 102 police personnel were recruited using purposive sampling. A standardized stress questionnaire is used in this study. The study finding reveals that total of 32 (31.4%) participants scored <15 indicating that stress in workplace presents no problem while 68(66.7%) participants scored between 15-30 which suggest that stress in workplace was likely to be causing a problem. There was a significant association of stress

levels among police personnel was found with different factors ($P<0.05$). The study concluded that police personnel suffering from stress due to their occupation.

Studies related to Jacobson progressive muscle relaxation technique.

M.Ramakrishnan and K. Kalai Chandran (2015) conducted an experimental study to evaluate the effect of Progressive Muscular Relaxation Exercise on the level of stress among elderly patient in JIPMER Hospital, Pondy, India. The sample size was 30 geriatric patients from rehabilitation center in JIPMER Hospital Pondycherry. Data were collected by stress questionnaires. The study findings revealed that there was a significant difference between the pre and post test of stress questionnaire. The mean test score at base line was 34.47 (SD=+/-) 7.24. It was significantly reduced to 23.43 (SD = +/- 8.70) if P=0.00 after the intervention. The study concluded that progressive muscular Relaxation Exercise program was effective in their quality of life and their functional activities among elderly patient.

Febu Elizabeth Joy et al (2014) conducted a explorative study to identify the effectiveness of JPMR Technique on social anxiety among high school adolescent in a selected school of Udupi district in Karnataka State. Non probability purposive sample technique was used in this study. Sample size is 193 and social anxiety scale for adolescent too used in this study. The study finding revealed that 52 (27%) adolescents were having Moderate social anxiety and there was significant association ($X^2 = 15.297$ $P<0.05$) between age of the in nursing home, preadolescents and social anxiety. The Jacobson's progressive muscle relaxation technique was found to be effective ($t = 10.646$ $dt = 39$. $P= 0.001$) in reducing the social anxiety. The study concluded that the social anxiety is common among adolescents.

Premeelarani Bommaraddi et al (2014) conducted a quasi experimental study to assess the effectiveness of Jacobson progressive muscle Relaxation (IPMR) Training to reduce anxiety and depression among people living with HIV in selected hospital in Udupi District in Karnataka. The sample size was 30 were recruited by purposive sampling technique. Hospital Anxiety and depression scale (HADS) were used in this study. The study finding revealed that out of 30 subjects, 13.30% (4) experiences abnormal anxiety and 16.7% (5) abnormal depression. There was significance difference between mean difference of pretest and post test scores of anxiety (t=8.471, dt = 29, P=0.001) and depression (t=6.811 dt=29, P=0.001). History of psychiatric illness (X^2= 6.584, dt=2 P=0.037). The study concluded that the JPMR training had a positive effect in reducing the anxiety and depression and JPMR can be used as an effective therapy.

Ray D et al (2014) conducted a prospective cross sectional study to assess the effectiveness of progressive muscle relaxation in female health care professionals in tertiary care hospital in eastern part of India. The 200 sample were recruited by using purposive sampling method. The presumptive life event stress scale was used in this study. The study finding reveals that significant decrease in resting heart rate, blood pressure and perceived stress scale levels was seen after PMR training. The study concluded that increase stress among female health care professionals is a causes offer concern and there is a need to adopt early life style modification by practicing relaxation exercises to ameliorate stress.

Yunping Li et al (2013) conducted an explorative study to assess the effectiveness of progressive muscle Relaxation Improves Anxiety and Depression of pulmonary arterial hypertension patients in Xiangya Hospital, central south university

in China. 130 Han Chineses patients with PAH were recruited by using randomized sampling method. Hospital Anxiety and Depression scale was used in this study. The study finding reveals that significant improvement in all Quality of life mental health domains ($P<0.05$) but not the physical health domains. The control group showed no significant improvement in any QOL domain. The study concluded that PMR practice is effective in improving anxiety, depression and the mental health components of QOL in patient with PAH.

Nisha Shinda et al (2013) conducted an experimental study to assess the immediate effect of Jacobson's Progressive Muscular Relaxation in Hypertension among teacher in pravasa institute of medical science, at Maharashtra, India. The sample size was 150 teacher working in various colleges in the vicinity in Pravasa institute of medical science. Data collected by using structured interview schedule. The study finding revealed that there was a statistically significant difference in systolic Blood pressure ($P<0.01$) diastolic blood pressure ($P=0.05$) and heart rate ($P<0.05$) significant reduction in post session. The study concluded that JPMR techniques helps in better control of blood pressure in hypertensive patients regardless of their initial level of hypertension.

Ghafari S. et al (2012) conducted a quasi experimental study to a identify the effectiveness of applying progressive muscle Relaxation Technique on Quality of life of patients with multiple sclerosis. The 66 sample is recruited by using non probability sampling method. Individual information Questionnaire sf- 8 Health survey, self reported checklist tool was used in this study. The study finding reveals that there was no significant difference between two group in mean scores of Health related quality of life before the study but this test showed a significant different

between two groups, one and two months after intervention (P<0.05). The study concluded that the study provide modest support for the effectiveness of Progressive Muscle Relaxation Technique on quality of life of multiple sclerosis patients

Maryam saeedi et al (2012) conducted a quasi experimental study to assess the effectiveness of progressive muscle relaxation on sleep quality of patients undergoing Hemodialysis in homodialysis centers of hospitals affiliated with shahid Behashti University of Medical science at Tehran in Iran. The 42 sample were recruited by using purposive sampling method. Pittsburgh sleep Quality Index (PSQI) used in this study. The study finding reveals that the mean of samples sleep quality total score after relaxation was significantly lower than before relaxation (P<0.001). The score of each sleep quality dimension (except for use of sleep medications) were significantly lower than before relaxation. The study concluded that PMR has a favourable impact on sleep quality in patients undergoing hemodialysis and can be applied and trained as a useful method to improve sleep quality of patients in hemodialysis wards.

Sheu et al (2010) conducted a quasi experimental study to examine the effect of Progressive Muscle Relaxation on blood pressure and psychosocial status in clients with essential Hypertension in Taiwan. The 40 sample recruited by using convenience sampling method. The study result reveals that decreases in pulse rate (2.9 beat/min) systolic blood pressure (5.1 mm hg) and diastolic blood pressure (3.1 mm Hg) occurred. The study concluded that JPMG significantly lowered patients perception of stress and it enhanced their perception of health.

Studies related to Jacobson progressive muscle relaxation technique among stress

Palak Patel et al (2015) conducted a quasi experimental study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara city. The study sample were selected by using non probability convenient sampling. The sample size was 30 staff nurse from selected hospitals of Vadodara city. Data was collected by stress assessment scale. The study finding reveals that 53.3% Nurses had moderate stress, 40.0% had mild stress 6.7% had severe stress as evidenced by pretest score 73.3% nurses has mild stress and no stress 26.7% as evidenced by post test score. The study concluded that progressive muscle relaxation therapy is effective in reducing the stress level of the staff nurses.

Umarani .J et al (2015) conducted a quasi experimental study to evaluate the effectiveness of Jacobson's progressive muscle relaxation technique on academic stress among the adolescents in selected school of mangaluru Karnataka. The sample size was 100 adolescents were selected using non probability purposive sampling. The data collected by stress rating scale. The study finding revealed that the mean post test stress score (35.76±SD) in the experimental group were found to be lesser than the mean pre test stress score (38.36±SD). The mean post test stress scores in the control group were found to be higher (38.16±SD) than the mean pre test stress scores (36.22±SD). The calculated 't' value ($t_{(98)}$=7.15) was greater than the table value ($t_{(98)}$ = 1.98) at 0.05 level of significance. The study concluded that Jacobson progressive muscle relaxation technique was effective in reducing the academic stress among the adolescents.

Deepti Dhyani et al (2015) conducted an experimental study to assess the effectiveness of progressive muscular relaxation on stress and disability associated with chronic low back pain among adult in Balawala, Dehradum. The sample size was 30 were selected by simple random sampling. Data collection tools using by quasi pain disability scale and DASS. The study finding reveals that progressive muscular relaxation showed significant differences then control group for VAS, stress and disability. The study concluded that use of progressive muscular relaxation as a treatment associated with a reduction in perception of pain, stress and improvement in wellbeing for the chronic low back pain patients.

Mohamad Roadi Isa et al (2013) conducted a quasi experimental study to assess the impact of applied progressive muscle relaxation training on the levels of depression, anxiety and stress among prostate cancer patients at university Malaya Medical Centre. The sample size was 155 patient were selected by purposive sampling technique. Data collected by using Depression, Anxiety stress scale. (DASS 21). The study finding reveals that 90.9% and 87.2% of patients anxiety ($P<0.001$, parial $r^2 = 0.198$) and stress ($P<0.001$, Parital $r^2 = 0.103$) at the end of the study in those receiving muscle training. There was no improvement in depression ($P=0.956$). The study concluded that the improvement in anxiety and stress showed the potential of APMAT in the management of prostate cancer patients.

Jose Rojan and D'Almeisda Victoria (2013) conducted a quasi experimental study to assess the effectiveness of Jacobson's Progressive Muscle Relaxation (JPMR) on blood pressure and health related stress level among patients with hypertension in a selected hospital of Mangalore. The 40 sample were recruited using purposive sampling method. Health related stress scale was used in this study. The

study finding shows that the mean systolic BP had reduced from 155.8 ± 10.14 to 121.7 ± 4.47 and mean diastolic BP had reduced from 92.7 ± 4.52 to 79.9 ± 62.63 after the administration of JPMR. The average reduction of systolic BP was 6.42mm of Hg and that of diastolic BP was 0.8mm of Hg over the 4 days. The mean health related stress level had reduced from 94.03 ± 7.64 to 62.8 ± 7.15 with a mean percentage reducing of 19.5%. The study concluded that JPMR was a cost effective, non invasive, non pharmacological alternative therapy in the management of stress and hypertension.

Fahimeh Kashani et al (2012) conducted a experimental study to assess the effectiveness of progressive muscle relaxation on reducing depression, anxiety and stress in women who underwent mastectomy for breast cancer at Isfahnan, Iran. The sample size was 48 breast cancer patient were selected by simple random sampling. Data collection were using by depression, Anxiety and stress scale (DASS42). The study finding reveals that mean scores of depression anxiety and stress were not significantly different between the case and control groups. The scores in the case group improved significantly after the treatment ($P<0.05$). The study concluded that JPMR can effective in the improvements of depression anxiety and stress. Therefore it can be recommended as an effective car program in patients with malignant disorder.

Rama Madhava and Deepa .H.S (2012) conducted an experimental study the impact of Jacobson's progressive muscle Relaxation (JPMR) in managing the perceived stress level among college student at Kristu Jayanti College Bangalore. The sample size were 30 by using purposive sampling technique. Data were collected using perceived stress scale. The study finding reveals that Before Relaxation mean

score 18.88 and SD 4.73. After relaxation mean score is 7.7 and SD 2.54 t value D 11.13. Significant at P<0 level. The study concluded that there was a significant decrease in the perceived stress of student who has practiced JPMR. JPMR was effective in reducing perceived stress.

CHAPTER - III

Methodology

INTRODUCTION

This chapter deals with research Methodology. In this study the researcher intended to assess the effectiveness of Jacobson progressive muscle relaxation technique on the level of stress among police at selected Battalion in Thirunelveli District.

RESEARCH APPROACH:

Quantative research approach was used for this study.

RESEARCH DESIGN:

The research design used in this study is Quasi experimental Non equivalent control group design. It is represented as

E	O_1	X	O_2
C	O_1	_	O_2

E – Experimental group

C - Control group

O_1 – Pre test level of stress

X – Intervention (Jacobson progressive muscle relaxation technique)

O_2 – Pos test level of stress.

VARIABLES:

Independent Variables	:	Jacobson progressive muscle relaxation technique
Dependent Variables	:	Stress.
Demographic Variable	:	Age, Sex, Education, Marital status, years of service, Place of Residence Income.

SETTING OF THE STUDY

The study was conducted in selected police Battalion at Thirunelveli District. The 9th and 11th Battalion of police was chosen for data collection. In 9th and 11th Battalion there is 1000 police were working, under 9th and 11th Battalion police, Constables, Nyack, Hawaldar, Inspector, Sub Inspector, DSP, ADSP, SP, DC. I had taken the Hawaldar because of the sufficient availability of sample. 9th group I was taken for control group and 11th Battalion group I was taken for experimental group.

POPULATION

Population

The target population of the study was all police (Hawalder)

Accessible Population

The accessible population of the study was police (Hawaldar) working in 11th Battalion in Thirunelveli District.

SAMPLE SIZE

The sample consists of 60 Hawaldar. 30 were selected in experimental group and 30 were selected in control group.

SAMPLING TECHNIQUE

Purposive sampling technique was used for the study.

SAMPLE SELECTION CRITERIA

Sample were selected based on the following inclusion and exclusion criteria.

INCLUSION CRITERIA

- Police who are willing to participate in the study.
- Police able to read, write and understand English or Tamil.
- Police who are about 20 and above 50 years of age.
- Police working in 11th Battalion.
- Police present on the day.

EXCLUSION CRITERIA:

- Police who are having problems regarding pulled muscle, broken bones, are any medical contraindication for physical activities.
- Police who are receive any other alternative therapy.

DATA COLLECTION TOOL:

The data collection tool used for this study was modified Police stress scale developed by the researcher.

DESCRIPTION OF THE TOOL:

The tool consists of two sections.

Section A : Socio Demographic Variables

It consists of demographic variable of the samples such as Age, Sex, Education, Marital status, Year of service, Place of Residence, Income.

Section B: Modified Police Stress Scale.

The modified Police stress scale consist 20 items on various aspects related to stress the total score was 100. The score interpretation was as follows.

SCORING AND INTERPRETATION:

Level of stress	Scoring
No Stress	1-20
Mild Stress	21-40
Moderate Stress	41-60
Severe Stress	61-80
Very Severe Stress	81-100

TESTING OF TOOL

VALIDITY

Content validity of the tool was established after obtaining certificating from four nursing experts and one medical expect in the field of psychiatry. The suggestions given by the experts were incorporated in the final tool after consultation with the researcher guide.

RELIABILITY

Reliability of the tool was established by split half method by using Spearman Rank correlation coefficient. The reliability score was r= 0.9 which shower a highly positive correlation of the tool. Hence the tool was considered reliable for preceding the study.

DATA COLLECTION PROCEDURE

After getting the permission from the higher authority from police department, the main study was conducted in the 11th Battalion section in Thirunelveli District. Data was collected during the month of October. 60 policemen were selected based on the inclusion and exclusion criteria using purposive sampling technique. The purpose of study was explained in detail to the selected policemen and the confidentiality of their responses was ensured. In control group pretest was conducted in 9th Battalion at Thirunveli Dist., by using the modified Police stress scale. Post test was conducted after 10 days with same scale. In experimental group pretest was conducted in 11th Battalion section in Thirunveli District. Pre test was conducted in first day by using the modified Police stress scale and second day Jacobson progressive muscle relaxation therapy was given for 20 minutes. The therapy is given for 10 days.

After 10 days the post test was conducted by using the same scale.

DATA ANALYSIS

The data were organized, tabulated, summarized and analyzed by using the descriptive and inferential statistical analysis. The analysis would be made by (t) test. The association between the selected demographic variables with knowledge would be analyzed and interpreted by using chi-square test.

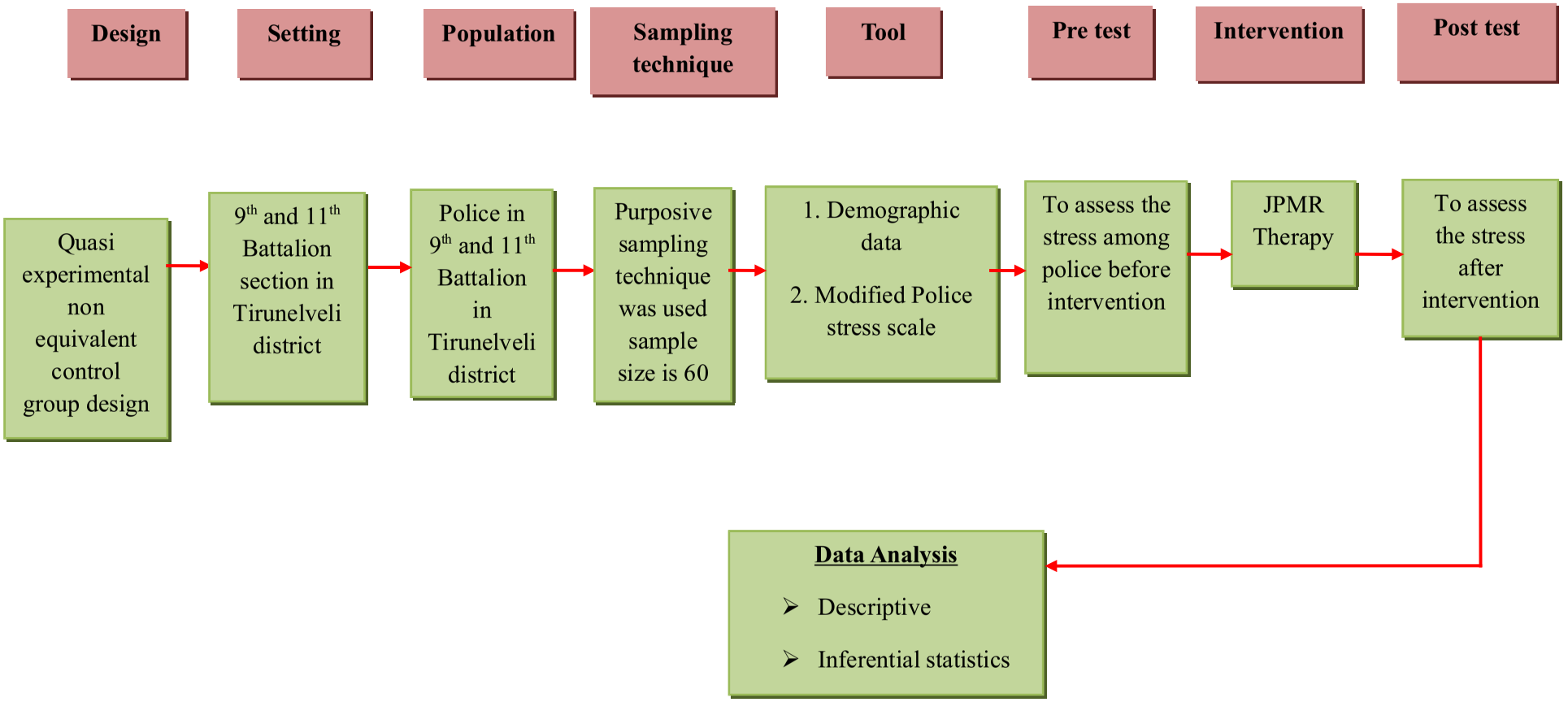


Figure 2 : **Schematic Representation of Research Design**

CHAPTER - IV

Data analysis and interpretation

According to Polit and Hunger (2005) analysis is the method of organizing, sorting and scrutinizing data in such a way that research question can be answered.

In this study deals with data analysis and interpretation of the collected data from 60 police people with stress in order to assess the effectiveness of Jacobson progressive muscle relaxation therapy, by assess the pre and post test scores among experimental group and control group .

The analysis and interpretation of data were based on data collection and the results were computed by using descriptive (mean, frequency, percentage distribution and standard deviation) and inferential ('t'-test and chi-square test) statistics and the results were interpreted in tables, figures and diagrams.

The analysis was done in order to achieve the following objectives of the study

OBJECTIVES OF THE STUDY

- To assess the pretest level of stress among police in experimental and control group.
- To assess the post test level of stress among police in experimental and control group.
- To determine the effectiveness of Jacobson's progressive muscle relaxation in the level of stress within experimental and control group

- To find out the association between level of stress with selected demographic variables such as Age, Sex, Education, Marital status, Income, Place of the residence, Year of service.

The study findings are presented in sections as follows:

Section A : Description of demographic variables on the level of stress among police in experimental group and control group.

Section B : Pre and post test on the level of stress among police in both experimental group and control group.

Section C : Effectiveness of Jacobson's is progressive muscle relaxation technique on level of stress among police.

Section D : Association between the level of stress among police, and their selected demographic variables in experimental group and control group .

Section A : Description of demographic variables on the level of stress among police

Table 1:

Frequency and percentage distribution of demographic variables in the experimental group and control group (N = 60).

Sl. No	Demographic Variables	Experimental Group		Control Group	
		f	%	f	%
1.	Age in years				
	(a) 20 – 30 years	12	40	19	63.33
	(b) 31 – 40 years	15	50	3	10
	(c) 41 – 50 yrs	3	10	8	26.67
	(d) 51 and above	0	0	0	0
2.	Sex				
	(a) Male	16	53.4	17	56.6
	(b) Female	14	46.6	13	43.4
3.	Educational Status				
	(a) S.S.L.C.	12	40	10	33.4
	(b) Higher Secondary	6	20	11	36.6
	(c) Under Graduate	9	30	7	23.4
	(d) Post Graduate	3	10	2	6.6
4.	Income				
	(a) Rs. 10,000 to 15,000	1	3.33	8	26.67
	(b) Rs. 16,000 to 20,000	2	6.67	13	43.33
	(c) Rs. 21,000 to 25,000	22	73.33	6	20
	(d) Rs. 26,000 to 30,000	5	16.67	3	10

Table One continued …….

Sl. No	Demographic Variables	Experimental Group		Control Group	
		f	%	f	%
5.	Marital Status				
	(a) Single	4	13.33	8	26.67
	(b) Married	24	80	21	70
	(c) Divorce	2	6.67	1	3.33
	(d) Widow	0	0	0	0
6.	Place of Residence				
	(a) Urban	14	46.67	18	60
	(b) Rural	16	53.33	12	40
7	Years of Service				
	(a) 1-8 yrs	5	16.67	2	6.67
	(b) 9-16 yrs	7	23.33	27	90
	(c) 17-24 yrs	9	30	1	3.33
	(d) 25-32 yrs	9	30	0	0

The above tables 1 shows Age in years in experimental group, 12(40%) were in the age group of 20-30 years, 15(50%) were in the age group of 31-40 years, 3(10%) were in the age group of 41-50 years, where as in the control group, 19(63.33%) were in the age group of 20-30 years, 3(10%) were in the age group of 31-40 years,18(26.67%) were in the age group of 41-50 years.

With regard to the sex in the experimental group,16(53.4%) were males and 14(46.6%) were females where as in the control group, 17(56.6%) were males and 13(43.4%) were females.

Regarding the Educational status in experimental group 12(40%) were studied S.S.L.C, 6(20%) were studied Higher secondary, 9(30%) were studied Under

Graduate, 3(10%) were studied Post Graduate. In control group 10(33.4%) were studied S.S.L.C, 11(36.6%) were studied Higher secondary, 7(23.4%) were studied Under Graduate ,2(6.6%) were studied Post Graduate.

Regarding the Income in experimental group 1(3.33) were Rs. 10,000 to 15,000 per month, 2(6.67) were Rs. 16000 to 20000 per month, 22(73.33) were Rs. 21,000 to 25000 per month, 5(16.67) were Rs. 26000 to 30000 per month. In control group 8(26.67) were Rs. 10000 to 15000 per month 13 (43.33) were Rs. 16,000 to 20,000 per month 26(20) were Rs. 21,000 to 25000 per month 3(10) were Rs. 26000 to 30000 per month.

Regarding the Marital status in experimental group 4(13.33%) were Single, 24(80%) were married, 2(6.67%) were Divorce and 6(0%) were Widow .In control group 8(26.67%) were Single, 21(70%) were married, 1(3.33%) were Divorce.

With regard to the place of Residence in the experimental group,14(46.67%) were Urban and 16(53.33%) were Rural where as in the control group, 18(60%) were Urban and 12(40%) were Rural.

With regard to the Years of Service in experimental group 5(16.67%) of them have 1-8 years, 7(23.33%) of them have 9-16 years, 9(30%) of them have 17-24 years and 9(30%) of them have 25-32 years. In control group 2(6.67%) of them have 1-8 years, 27(90%) of them have 9-16 years, 1(3.33%) of them have 17-24.

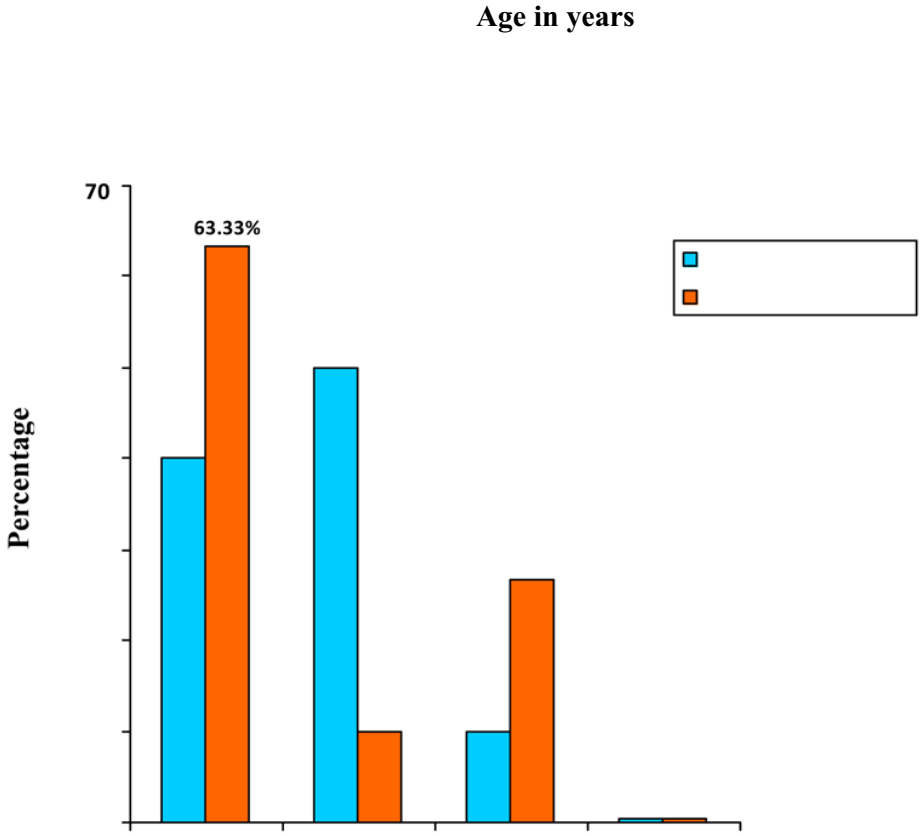
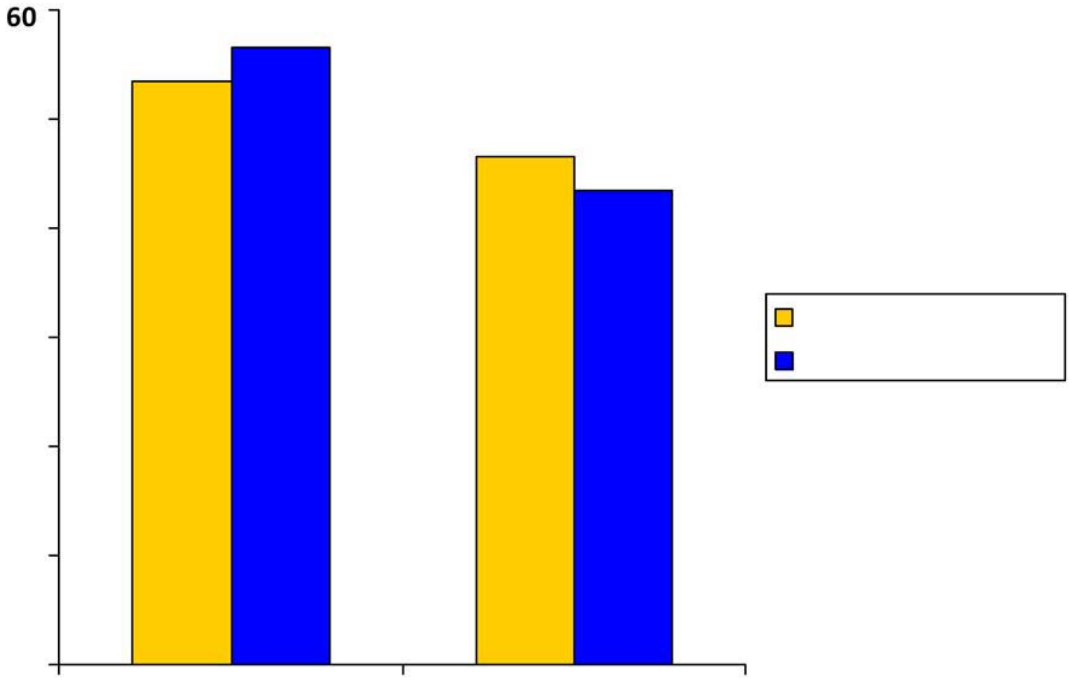


Figure 3: **Distribution of samples according to age in years**



Sex

Figure 4 : **Distribution of samples according to Sex**

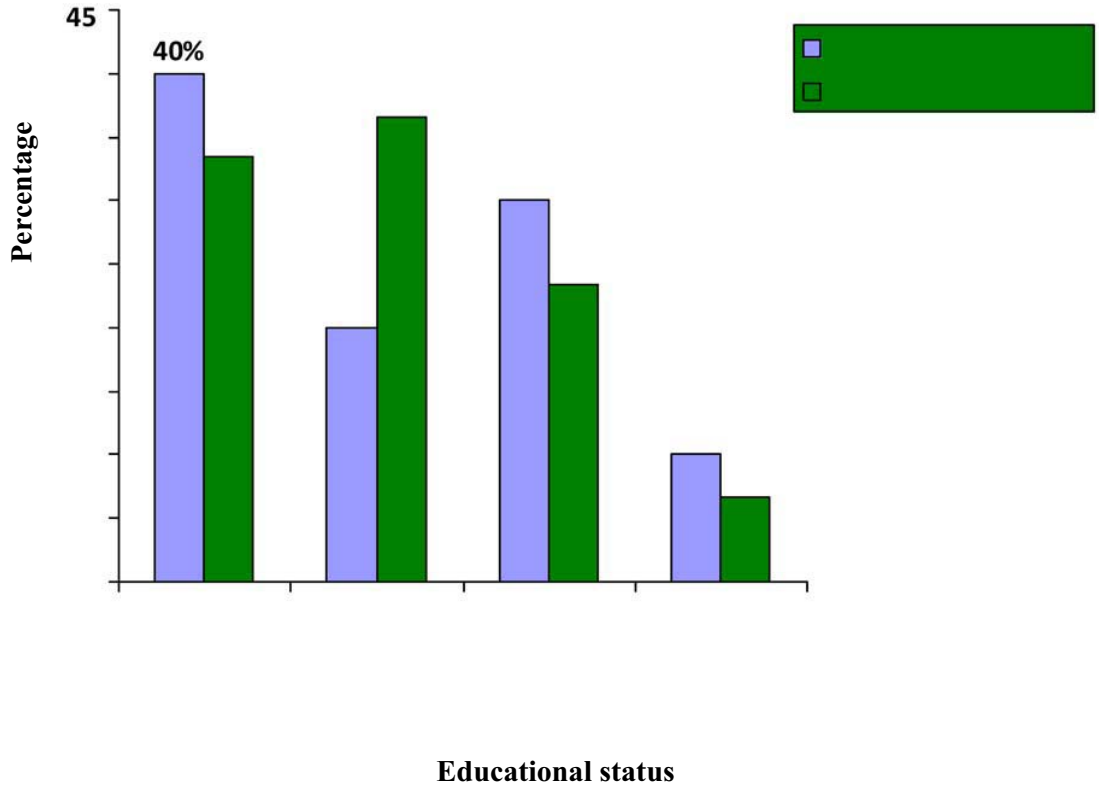
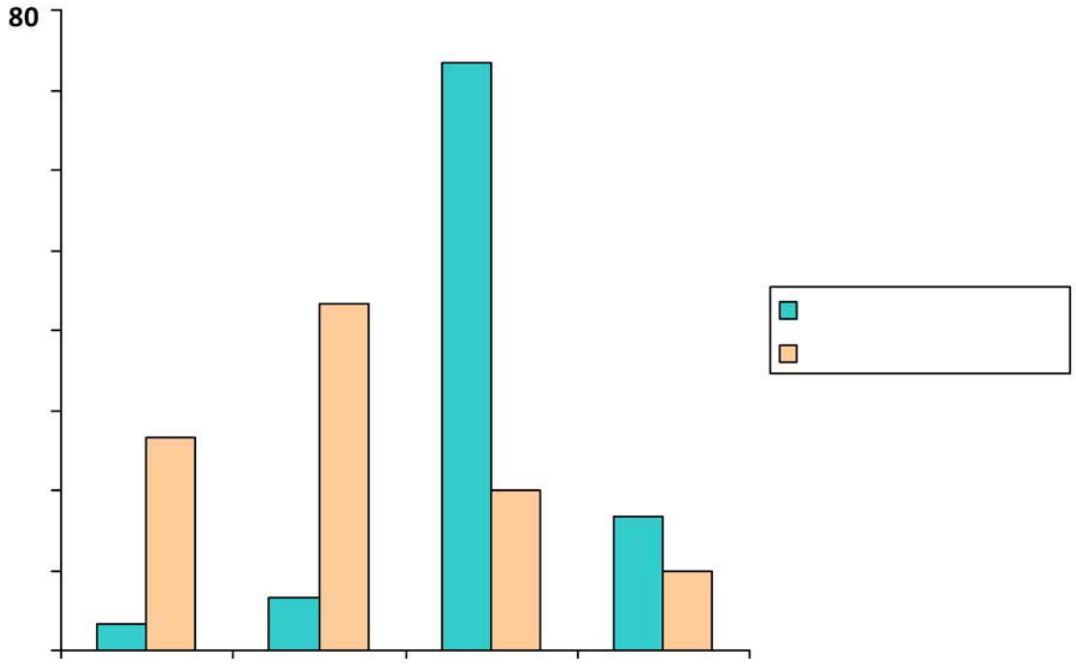
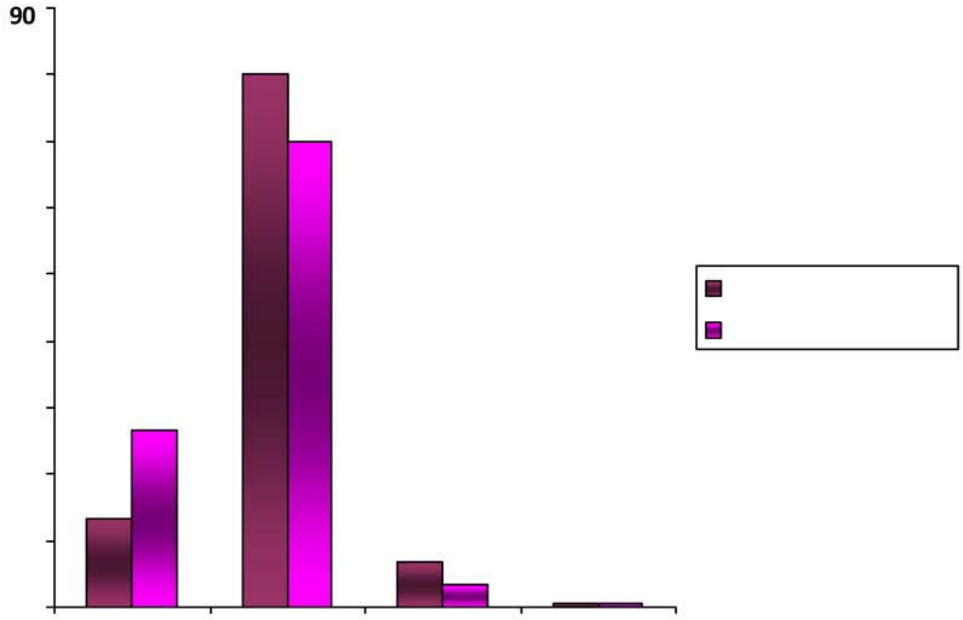


Figure 5 : **Distribution of samples according to educational status**



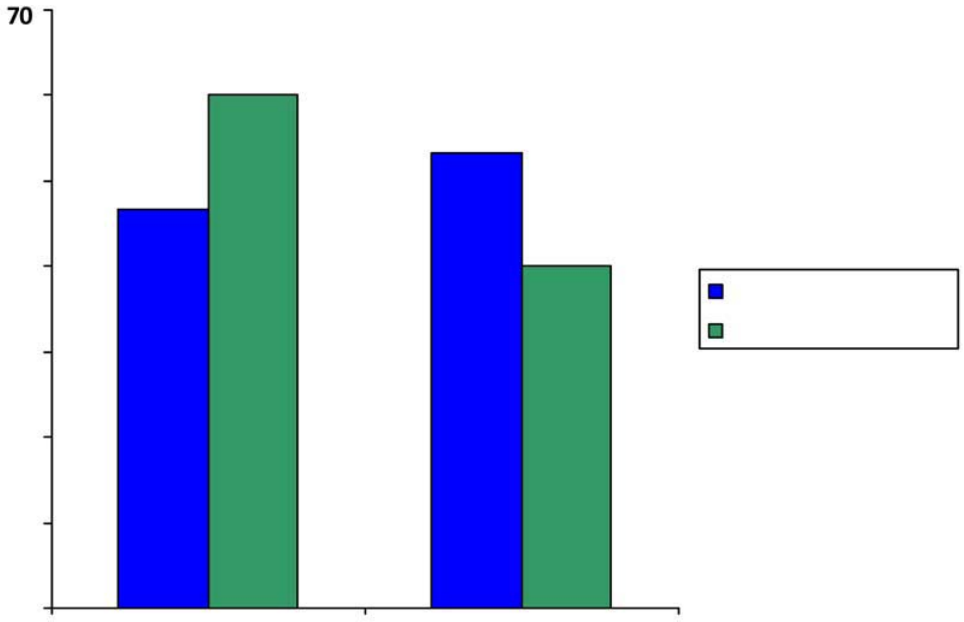
Income

Figure 6 : **Distribution of samples according to Income**



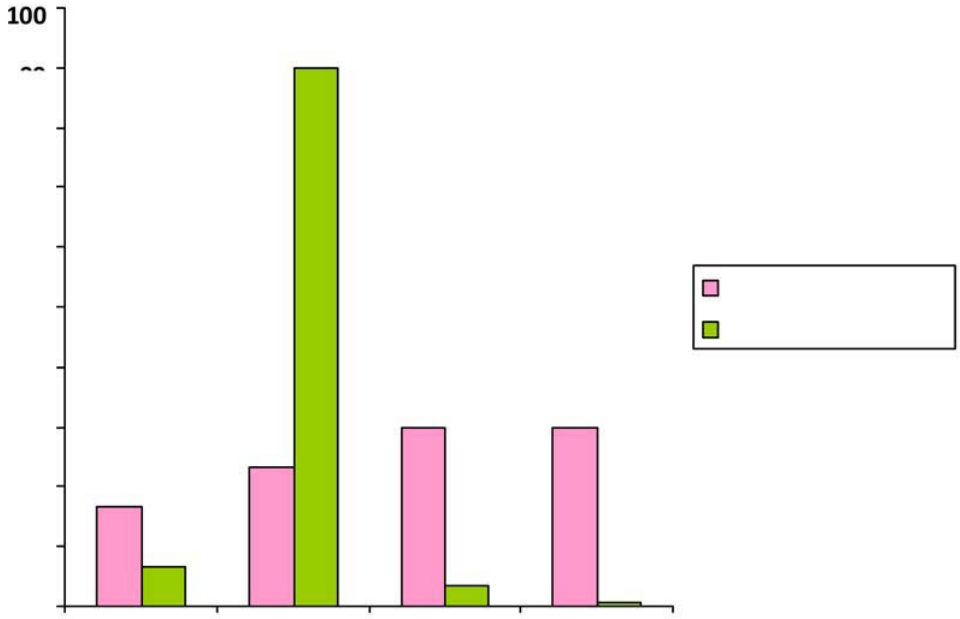
Marital status

Figure 7 : **Distribution of samples according to marital status**



Place of Residence

Figure 8 : **Distribution of samples according to Place of Residence.**



Years of Service

Figure 9 : **Distribution of samples according to years of service.**

Section : B

Table 2 :

Frequency, percentage distribution of pre and post test on the level of stress in experimental group.

Sl. No	Level of Stress	Experimental Group			
		Pre Test		Post	
		f	%	f	%
1.	Normal	0	0	0	0
2.	Mild	0	0	4	13.33
3.	Moderate	0	0	26	86.67
4.	Severe	12	40	0	0
5.	Very severe	18	60	0	0

The above table 2 shows the level of stress in the experimental group among police. Out of 30 subjects in the experimental group, 12(40%) had Severe level of stress and 18(60%) had Very severe level of stress in their pre-test assessment. 4(13.33%) of them had Mild level of stress, 26(86.67%) had Moderate level of stress.

Table 3 :

Frequency, percentage distribution of pre and post test on the level of stress in control group.

Sl. No	Level of Stress	Control Group			
		Pre Test		Post Test	
		f	%	f	%
1.	Normal	0	0	0	0
2.	Mild	0	0	0	0
3.	Moderate	0	0	0	0
4.	Severe	14	46.67	18	60
5.	Very severe	16	53.33	12	40

The above table 3 shows the level of stress in the control group among police. Out of 30 subjects in the control group, 14(46.67%) had Severe level of stress and 16(53.33%) had Very severe level of stress in their pre-test assessment. Whereas in the post-test was 18(60%) had Severe level of stress and 12(40%) had Very severe level of stress.

Section : C

Effectiveness of Jacobson's progressive muscle relaxation technique on level of stress among police.

Table 4

Comparison of pre and post test level of stress among police in experimental group.

Sl. No	Experimental Group	Mean	SD	't' value	Table value
1.	Pre Test	81.23	9.35	11.39	2.04
2.	Post test	49.06	11.43		

* Significant at p< 0.05 level

Table 4 reveals that among experimental group the mean pre-test score was 81.23 standard deviation was 9.35. The mean post-test was 49.06 with standard deviation 11.43. The mean difference was 32.17. The obtained 't' value was 11.39, where as the table value was 2.04. It was significant at p< 0.05 level.

It was inferred that Jacobson's progressive muscle relaxation technique was highly effective in reducing of stress among police.

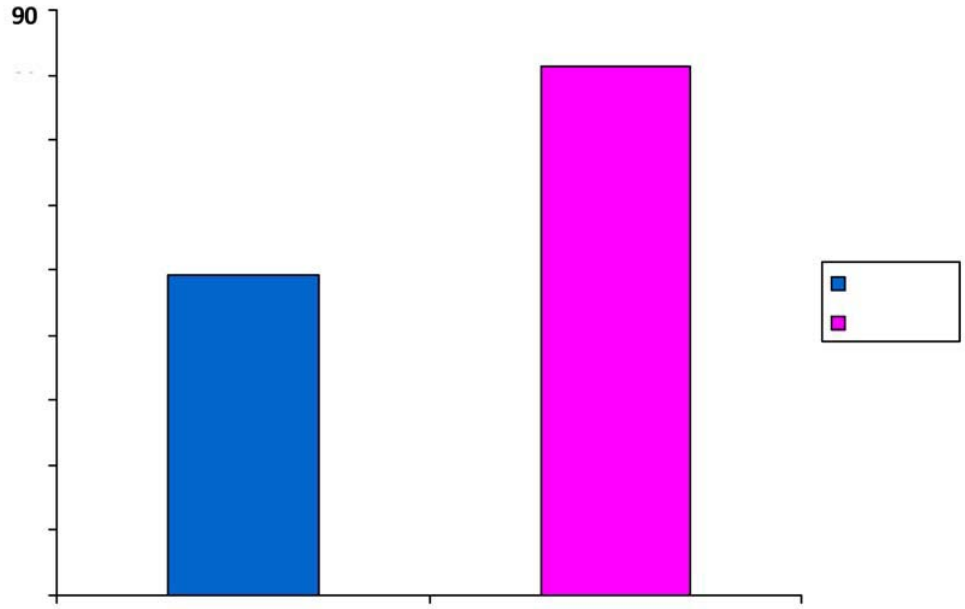


Figure 10 : **Comparison of pre and post test level of stress among police in experimental group**

Table 5 :

Comparison of pre and post test level of stress among police in control group

Sl. No	Control Group	Mean	SD	't' value	Table value
1.	Pre Test	81.26	9.80	1.33	2.04
2.	Post test	80.86	10.18		

* Significant at p< 0.05 level

Table 5 reveals that among control group the mean pre-test score was 80.8 standard deviation was 9.80. The mean post-test was 81.26 standard deviation 10.18. The mean difference was 0.06. The obtained 't' value was 1.33, where as the table value was 2.04. There is significant at p< 0.05 level.

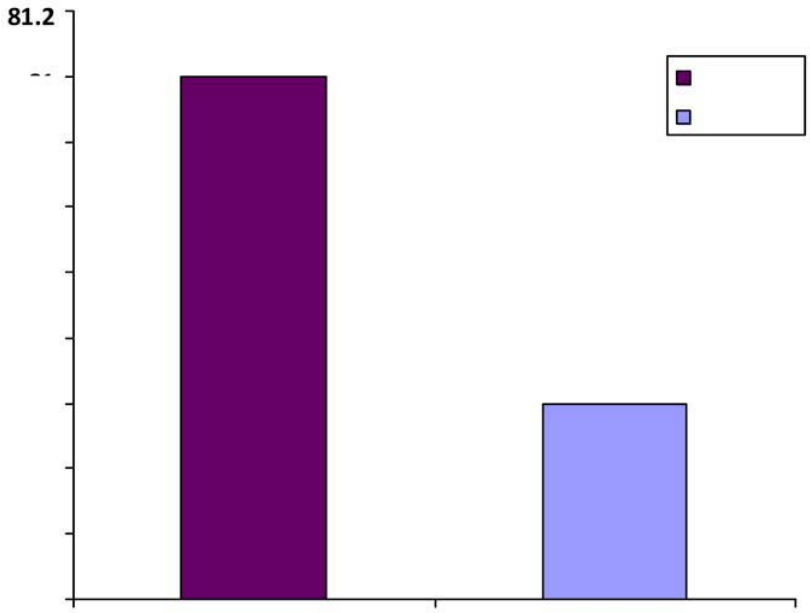


Figure 11 : **Comparison of pre and post test level of stress among Police in control group**

Table 6 :

Comparison of post test level of stress among police in experimental group and control group

Sl. No	Group	Mean	SD	't' value	Table value
1.	Experimental Group (Post Test)	49.06	11.43	10.86%	2.04
2.	Control Group (Post test)	80.86	10.18		

* Significant at p< 0.05 level

Table 3.3 reveals that among experimental group the mean post test score was 49.06 with standard deviation with 11.43. In the control group the mean post test was 80.86, with standard deviation 10.18. The mean difference was 31.8. The obtained 't' value was 10.86, and the table value was (2.04), which was significant at p< 0.05 level.

It was inferred that Jacobson progressive muscle relaxation technique is effective in reducing stress among police.

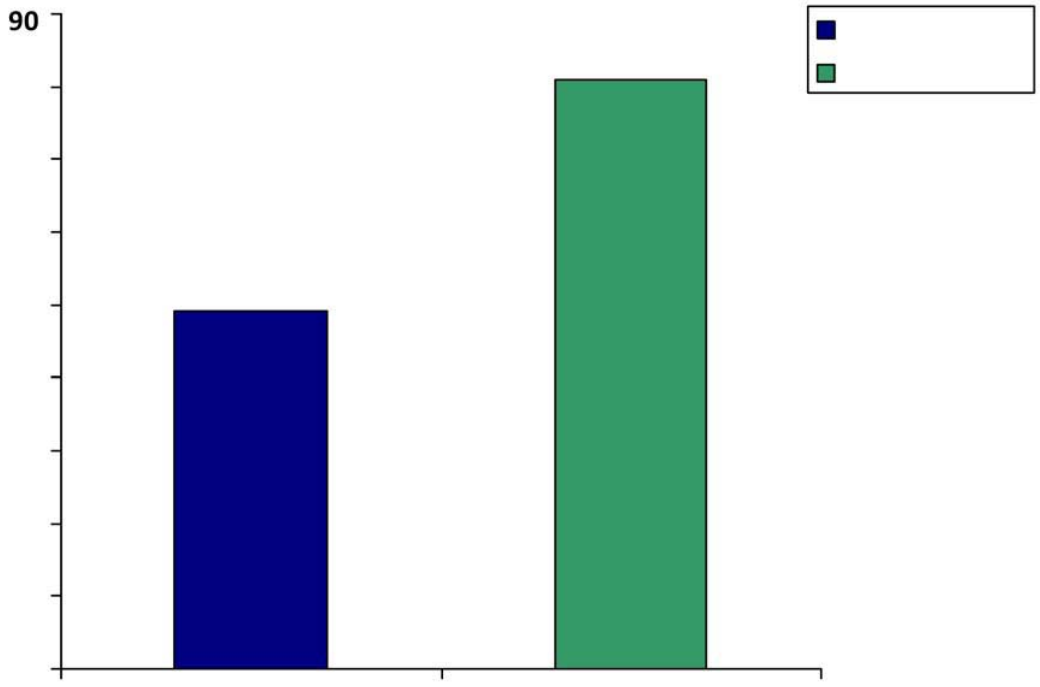


Figure 12: **Comparison of post test level of stress among police in experimental and control group**

Section D

Table 7

Association between the level of stress among police, and their selected demographic variables in experimental group and control group .

Sl. No	Demographic Variables	Experimental Group					Control Group				
		f	%	df	χ^2	t	f	%	df	χ^2	t

1.	Age in years										
	(a) 20 – 30 years	12	40				19	63.33			
	(b) 31 – 40 years	5	50	12	2.34	16.81	3	10	12	11.44	16.81
	(c) 41 – 50 yrs	3	10				8	26.67			
	(d) 51 and above	0	0				0	0			
2.	Sex										
	(a) Male	16	53.4	3	1.61	13.25	17	56.6	4	0.22	13.23
	(b) Female	14	46.6				13	43.4			
3.	Educational Status										
	(a) S.S.L.C.	12	40				10	33.4			
	(b) Higher Secondary	6	20	12	2.56	16.81	11	36.6	12	4.42	16.81
	(c) Under Graduate	9	30				7	23.4			
	(d) Post Graduate	3	10				2	6.6			
4.	Income										
	(a) 10,000 to 15,000	1	3.33				8	26.6			
	(b) 16,000 to 20,000	2	6.67	12	3.84	16.81	13	43.33	12	6.9	16.81
	(c) 21,000 to 25,000	22	73.33				6	20			
	(d) 26,000 to 30,000	5	16.67				3	10			

Table Seven continued ……..

Sl. No	Demographic Variables	Experimental Group					Control Group				
		f	%	df	χ^2	t	f	%	df	χ^2	t
5.	Marital Status			1	1.92	16.81			12	3.01	16.81
	(a) Single	4	13.33	2			8	26.67			
	(b) Married	24	80				21	70			
	(c) Divorce	2					1	3.33			

	(d) Widow	0	6.67				0	0			
			0								
6.	Place of Residence										
	(a) Urban	14	46.6				18	60			
	(b) Rural	16	7	4	0.70	13.23	12	40	4	1.14	13.23
			53.33								
7	Years of Service										
	(a) 1-8 yrs	5	16.67				2	6.67			
	(b) 9-16 yrs	7		12	1.66	16.81	27	90	12	3.6	16.81
	(c) 17-24 yrs	9	23.33				1	3.33			
	(d) 25-32 yrs	9					0	0			
			30								
			30								

Significant at P<0.05

The above table 7 show that association between the level of stress with demographic variables both in experimental and control groups. The result shows that there is an no association between the level of stress and demographic variables. Therefore the research hypothesis is rejected and null hypothesis is formulated.

CHAPTER - V

Result and Discussion

The study was done to assess the effectiveness of Jacobson's progressive muscle relaxation technique on the level of stress among police. The study was conducted at 11th police battalion in Thirunelveli district. The tool used as modified Police stress scale. Pre test and post test were conducted using the same scale t-test was used to find out he association between the selected demographic variable with the level of stress among police.

OBJECTIVE OF THE STUDY

- To assess the pretest level of stress among police in experimental and control group.
- To assess the post test level of stress among police in experimental and control group.
- To determine the effectiveness of Jacobson progressive muscle relaxation in the level of stress within experimental and control group
- To find out the association between level of stress with selected demographic variables such as Age, Sex, Education, Marital status, Income, Place of the residence, Years of service.

Distribution of study according to demographic variables

According to the Age in years in experimental group, 12(40%) were in the age group of 20-30 years, 15(50%) were in the age group of 31-40 years, 3(10%) were in the age group of 41-50 years, where as in the control group, 19(63.33%)

were in the age group of 20-30 years, 3(10%) were in the age group of 31-40 years,18(26.67%) were in the age group of 41-50 years.

With regard to the sex in the experimental group,16(53.4%) were males and 14(46.6%) were female where as in the control group, 17(56.6%) were males and 13(43.4%) were females.

Regarding the Educational status in experimental group 12(40%) were studied S.S.L.C, 6(20%) were studied Higher secondary, 9(30%) were studied Under Graduate, 3(10%) were studied Post Graduate . In control group 10(33.4%) were studied S.S.L.C, 11(36.6%) were studied Higher secondary ,7(23.4%) were studied Under Graduate ,2(6.6%) were studied Post Graduate.

Regarding the Income in experimental group 1(3.33%) were Rs. 10,000 to 15,000 per month, 2(6.67%) were Rs. 16000 to 20000 per month, 22(73.33%) were Rs. 21,000 to 25000 per month, 5(16.67%) were Rs. 26000 to 30000 per month. In control group 8(26.67%) were Rs. 10000 to 15000 per month 13 (43.33%) were Rs. 16,000 to 20,000 per month 26(20%) were Rs. 21,000 to 25000 per month 3(10) were Rs. 26000 to 30000 per month.

Regarding the Marital status in experimental group 4(13.33%) were Single, 24(80%) were married, 2(6.67%) were Divorce. In control group 8(26.67%) were Single, 21(70%) were married, 1(3.33%) were Divorce.

With regard to the place of Residence in the experimental group,14(46.67%) were Urban and 16(53.33%) were Rural where as in the control group, 18(60%) were Urban and 12(40%) were Rural.

With regard to the Year of Service in experimental group 5(16.67%) of them have 1-8 years, 7(23.33%) of them have 9-16 years, 9(30%) of them have 17-24 years and 9(30%) of them have 25-32 years. In control group 2(6.67%) of them have 1-8 years, 27(90%) of them have 9-16 years, 1(3.33%) of them have 17-24 years.

DISTRIBUTION OF STUDY ACCORDING TO THE OBJECTIVE ARE

To assess the pre test level of stress among police in experimental and control group.

Out of 30 sample in the experimental group , 0(0%) of them had normal level of stress ,0(0%) of them had Mild level of stress, 0(0%) had Moderate level of stress, 12(40%) had Severe level of stress and 18(60%) had Very severe level of stress in their pre-test assessment.

Out of 30 sample in the control group, 14(46.67%) had Severe level of stress and 16(53.33%) had Very severe level of stress in their pre-test assessment.

To assess the post test level of stress among police in experimental and control group.

Out of 30 subjects in the experimental group Whereas in the post-test 26(86.67%) of them had Mild level of stress, 26(86.67%) had Moderate level of stress.

Whereas in the post-test 18(80%) had Severe level of stress and 12(40%) had Very severe level of stress.

To assess the effectiveness of Jacobson progressive muscle technique on the level of stress with in experimental group and control group.

Reveals that among experimental group the mean pre-test score was 81.23 standard deviation with 9.35. The mean post-test score was 49.06 with standard deviation was 11.43. The mean difference was 32.17. The obtained 't' value was 11.39, where as the table value was 2.04. It was significant at $p< 0.05$ level.

It was inferred that Jacobson progressive muscle relaxation technique was highly effective in reducing of stress among police.

Reveals that among control group the mean pre-test score was 80.8 with standard deviation with 9.80. The mean post-test was 80.86 with standard deviation 10.18. The mean difference was 0.06. The obtained 't' value was 1.33, where as the table value was 2.04. There was no significant at $p< 0.05$ level.

The study finding was concurrent with the following study Palak Patel et al (2015) conducted a quasi experimental study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara city. The study sample were selected by using non probability convenient sampling. The sample size was 30 staff nurses from selected hospitals of Vadodara city. Data was collected by stress assessment scale. The study finding that in pre test 53.3% most of the nurses had Moderate stress, 40% had mild stress and 6.7% had severe stress. In post test most of the nurse 73.3% had mild stress and no stress was 26.7%. The study concluded that progressive muscle relaxation therapy is effective in reducing the stress level of the staff nurses.

HYPOTHESIS:

There will be a significant difference in the level of stress among police in experimental group after intervention

The study finding reveals that among experimental group the mean pre-test score was 81.23 standard deviation was 9.35. The mean post-test was 49.06 with standard deviation 11.43. The mean difference was 32.17. The obtained 't' value was 11.39, where as the table value was 2.04. It was significant at $p< 0.05$ level.

It was inferred that Jacobson's progressive muscle relaxation technique was highly effective in reducing of stress among police. So the H1 is proved.

There will be significant association between the level of stress and selected demographic variables.

The result shows that there is an no association between the level of stress and demographic variables such as Age, Sex, Education, Marital status, Income, Place of the residence, Year of service. Therefore Research hypothesis is rejected and null hypothesis is formulated.

CHAPTER - VI

Summary, Conclusion And Recommendations

This chapter deals with summary, conclusion, limitation and recommendation of the study. Further it includes implications for the Nursing Practice, Nursing Education, Nursing Administration and Nursing Research.

Summary of the Study

The aim of the study is to assess the effectiveness of Jacobson progressiveness muscle relaxation technique on the level of stress among police. The objectives of the study were

- To assess the pretest level of stress among police in experimental and control group.
- To assess the post test level of stress among police in experimental and control group.
- To determine the effectiveness of Jacobson's progressive muscle relaxation in the level of stress within experimental and control group
- To find out the association between level of stress with selected demographic variables such as Age, Sex, Education, Marital status, Income, Place of the residence, Year of service.

A quasi experimental non equivalent control group design was chosen for this study. Purposive sampling technique was used for this study. Subjects were selected based upon the inclusion and exclusion criteria. 60 subjects were selected for the

study. 30 Subjects were assigned to the experimental group and 30 subjects were assigned to the control group.

The tool used to collect the data consisted of two parts, Part I: consist of demographic Variables with age, gender, educational status, marital status, Income, place of residence, year of service. Part II consist of Modified Police stress Scale to assess the level of stress among police.

Reliability of the tool was calculated by using test-retest method(r =0.9). Data collection was done for 4 weeks. Sample were selected based on the inclusion and exclusion criteria. Pre test was done by using demographic variables and Modified Police stress scale on day one.

The pretest was conducted by using the Modified Police stress scale. Scale was distributed by the researcher. They were asked to the question by choosing the correct one. Thirty minutes was allotted for this subject. The Jacobson progressive muscle relaxation therapy was given for 20 minutes. The therapy is given for 10 days in each group.

After 10 days the post test was conducted by using the same scale. Collected data were analyzed by both descriptive statistics (mean, standard deviation, frequency and percentage) and inferential statistics (dependent and independent‘t’ test, chi-square) and results were calculated.

Major Findings of the Study

It reveals that among experimental group the mean pre-test score was 81.23 with standard deviation was 9.35. The mean post-test was 49.06 standard deviation

11.43. The mean difference was 32.11. The obtained 't' value was 11.39, where as the table value was 2.04. It was significant at $p< 0.05$ level.

It was inferred that Jacobson progressive muscle relaxation technique was highly effective in reducing on the level stress among police.

It reveals that among control group the mean pre-test score was 80.8 standard deviation was 9.80. The mean post-test was 80.86 with standard deviation 10.18. The mean difference was 0.06. The obtained 't' value was 1.33, where as the table value was 2.04. It was significant at $p< 0.05$ level.

The result show that there is no association between the level of stress and selected demographic variables in experimental group and control group .

Conclusion

The main conclusion of the present study is Jacobson progressive muscle relaxation technique is effective in reducing stress among police which is denoted by significant level of stress. After the intervention there had been a significant reduction in level of stress. The selected subjects became familiar and found themselves comfortable and also expressed satisfaction.

Implication of the Study

Nursing implication includes specific information for Nursing practice, Nursing Education, Nursing Administration and Nursing research.

- Jacobson progressive muscle relaxation technique can be introduced as a stimulating mode of intervention by the nurses for promoting relaxation among the patients suffering from various illness

- Jacobson progressive muscle relaxation technique can be incorporated into routine nursing intervention.
- Jacobson progressive muscle relaxation technique can be given for staff nurses working in multi specialty units. This therapy will help to reduce their work stress and anxiety.

Nursing education

It is important to have educational programme on Jacobson progressive muscle relaxation technique exercise for all nursing students, so that they can apply this technique to reduce the stress and anxiety experienced by the inpatients in the hospital.

- Nurse educator can encourage students to conduct health teaching sessions on various relaxation methods.
- Staff development programme need to be arranged, so that the nurse educator can encourage the students to provide relaxation therapies to the patient.

Nursing administration

- Nursing administrator can organize in-service education programmes for staff nurses regarding Jacobson progressive muscle relaxation technique.
- Nurse administrator can make arrangements for the practice of Jacobson progressive muscle relaxation technique in hospital, so that the staff nurses can provide calm, quiet, clean and safe environment to the patients for the practice.

Nursing research

- ❖ Researchers should focus on non-pharmacological interventions to reduce stress, anxiety and depression.
- ❖ The findings should be disseminated through conferences, seminars and publications in professional, national and international journals.

Recommendations

1. A similar study could be conducted with stress for police people to find out the effectiveness of the Jacobson progressive muscle relaxation technique. A comparative study can be conducted to find out the difference in level of stress, anxiety and depression for both boys and girls.
2. A study can be conducted with large sample size to generalize the results of the study.
3. Research can be conducted to find out the various innovative methods to reduce the level of stress, anxiety and depression.
4. Research can be done on various populations at various settings.
5. Research can be done to compare the level of stress in police people and those who suffer from other serious medical illnesses.

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APPENDICES : A

SREE MOOKAMBIKA COLLEGE OF NURSING

(Approved by the Government of Tamil Nadu & Recognised by Indian Nursing Council, New Delhi, Tamil Nadu state Nurses & Midwives Council, Chennai.)
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM,
KULASEKHARAM, K.K.DIST., TAMIL NADU, PIN : 629 161.
Phone : 04651 - 280743, 280866, 280742, 280745

ETHICAL COMMITTEE CLEARANCE *Date :* 23-12-2014

To *Lr. No.*

Mrs. Dhony . G

I YR .M.Sc (N),

Sree Mookambika College of Nursing,

Kulasekharam.

Ref: Research Topic: A Study to assess the effectiveness of Jacobson progressive muscle relaxation technique on the level of stress among police at selected battalion in Thirunelveli District.

Sub: Approval of the above reference study .

Dear Dhony . G

Ethics committee of Sree Mookambika College of Nursing, Kulasekharam reviewed and discussed the study proposal documents submitted by you related to the conduct of the above referenced study in the meeting held on 23-12-2014.

The following ethical committee Members were present at the meeting held on 23-12-2014.

NAME	PROFESSION	POSITION IN THE COMMITTEE
Prof. Mrs. Santhi Letha	Nursing	Chair Person
Dr. Kani Raj Peter	Medical	Basic Medical Scientist
Dr. T.C. Suguna	Nursing	Clinician
Adv. Mohanan	Legal	Legal Expert
Prof. Mrs.Ajitha Retnam	Nursing	Member secretary
Dr.P. Selva Raj	Management	Philosopher
Mr. Natarajan	Social	Medical Social Worker
Mrs. Latha	Lay Person	Community Person

After due ethical and scientific consideration, the ethics committee has approved the above presentation submitted by you.

Regards,

Mrs. Santhi Letha PhD (N)

Ethics Committee Chairperson,

Sree Mookambika College of Nursing,

V.P.M. Complex, Padanilam, Kulasekharam.

Date : 23-12-2014

Place :Kulasekharam

APPENDICES :B

LETTER SEEKING EXPERT OPINION FOR TOOL VALIDITY

Date :

To

Madam/Sir

Sub : M.Sc Nursing Programme dissertation – Validation of study tool request – reg:

Ms/Mrs. **Dhony. G** a bonafide if II Year M.Sc Nursing student of Sree Mookambika College of Nursing is approaching you to obtain validation of study tool pertaining to her dissertation in practical fulfillment of the requirement for the degree of Master of Science in Nursing. The selected topics **"A Study to assess the effectiveness of Jacobson progressive muscle relaxation technique on the level of stress among police at selected battalion in Thirunelveli District".** In this regard I request you to kindly extent possible technical guidance and support for successful completion of dissertation.

I enclosed here with a check list for your evaluation.

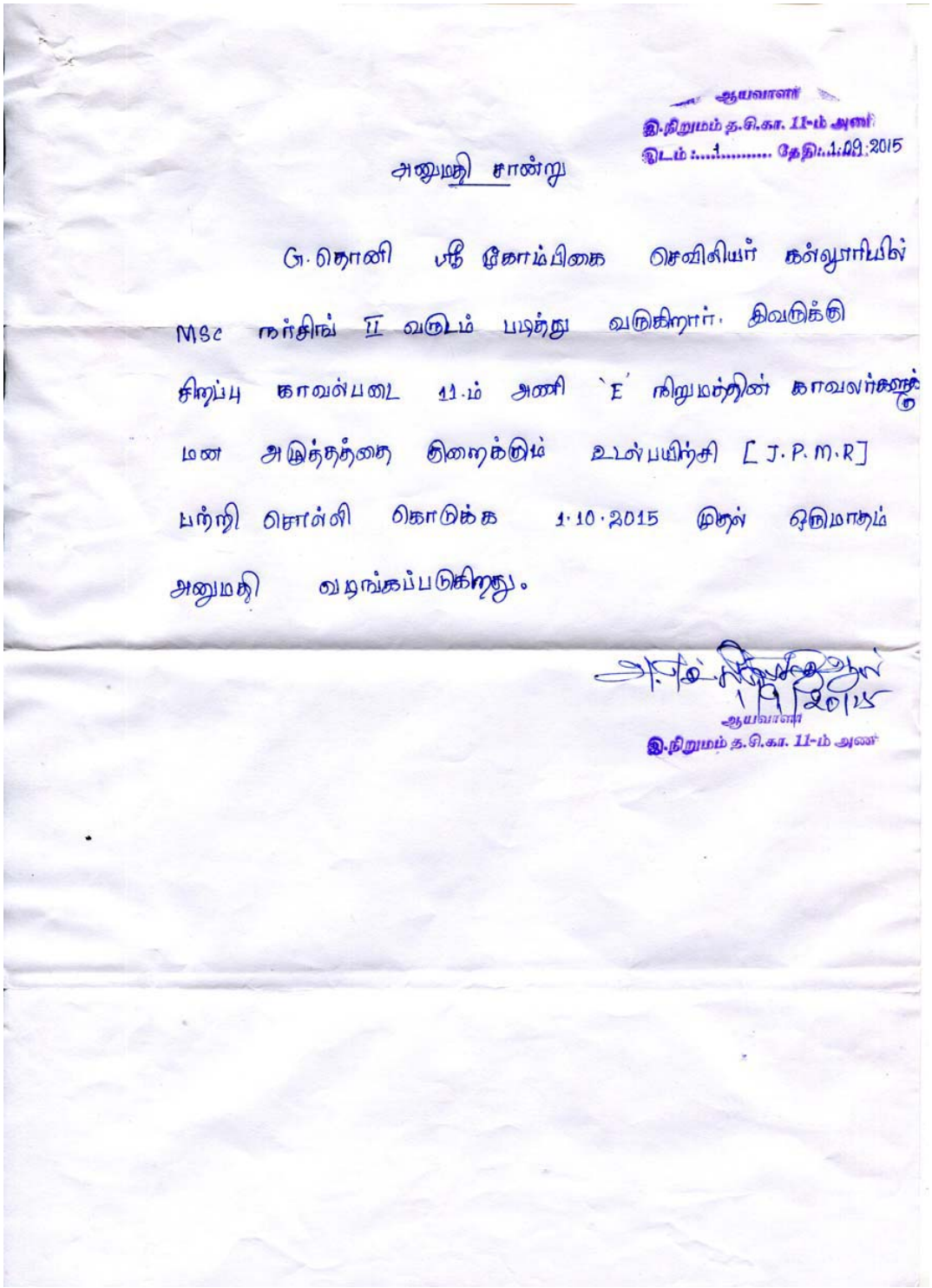
Thanking You

Yours Sincerely

PRINCIPAL

PRINCIPAL
Sree Mookambika College of Nursing
Kulasekharam-629 161

APPENDICES :C



ஆயவாளர்
இ.நிறுமம் த.பி.கா. 11-ம் அணி
இடம் :.....1..... தேதி:.1.09.2015

அனுமதி சான்று

செ. தொனி பதி மேகாம்பிகை செவிலியர் கல்லூரியில் MSc நர்சிங் II வருடம் படித்து வருகிறார். திவருக்கு சிறப்பு காவல்படை 11-ம் அணி 'E' நிறுமத்தின் காவலர்களுக்கு மன அழுத்தத்தை குறைக்கும் உடல்பயிற்சி [J.P.M.R] பற்றி சொல்லி கொடுக்க 1.10.2015 முதல் ஒருமாதம் அனுமதி வழங்கப்படுகிறது.

1/9/2015
ஆயவாளர்
இ.நிறுமம் த.பி.கா. 11-ம் அணி

APPENDICES : D

Date 30.10.2015
(October)

Office of the inspector of Police
'E' Coy T.S.P. XIth BN.

Certificate

This is to certify that Mrs.G.Dhony. IInd Year M.Sc.Nursing student of Sree Mookambika College of Nursing has done her data collection regarding the effectiveness of Jacobson's Progressive muscle relaxation technique on the level of stress among police in 11th battalion (E company) in Thirunelveli District.

30/10/2015
INSPECTOR OF POLICE
"E" COY TSP XI BN

APPENDICES : E

LIST OF EXPERTS FOR TOOL VALIDATION

1. **Dr. K. Kanashalingavelan, MD, D.P.M, D.N.B**
   Associate Professor,
   Sree Mookambika Institute of Medical Science,
   Kulasekharam.

2. **Mr. Pichai. A**
   Asst. Professor,
   HOD Mental Health Nursing,
   CSI College of Nursing,
   Karakonam.

3. **Mrs. Femila**
   Asst. Professor.
   HOD Mental Health Nursing,
   Christian College of Nursing,
   Neyyoor.

4. **Mrs. Jega Juliet**
   Asst. Professor,
   Christian College of Nursing,
   Neyyoor.

5. **Mr. Vinfred . K**
   Associate Professor,
   Annammal college of Nursing,
   Kuzhithurai.

APPENDICES : F

EVALUATION TOOL CHECK LIST

Name of the expert :

Designation :

College :

Respected Madam / Sir,

Kindly go through the demographic variables, and Modified Police Stress scale, please give your valuable suggestions regarding accuracy, relevancy, and appropriateness of the content. If there is any suggestions or comments, please mention in the remarks column.

PART : A

DEMOGRAPHIC VARIABLES

Sl. No	Items		Remarks
	Accepted	Not Accepted	
1			
2			
3			
4			
5			
6			
7			

PART : B

MODIFIED POLICE STRESS SCALE

Sl. No	Items		Remarks
	Accepted	Not Accepted	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

APPENDICES : G

DESCRIPTION OF TOOL

PART – I

This part seeks information regarding the selected factors. Kindly read all the questions carefully and tick (✓) the right option your answers with be confidential.

1. Age in years
   (a) 20 - 30 yrs
   (b) 31 – 40 yrs
   (c) 41 – 50 yrs
   (d) 51 and above
2. Sex
   (a) Male
   (b) Female
3. Education
   (a) S.S.L.C.
   (b) Higher Secondary
   (c) Under graduate
   (d) Post graduate
4. Income
   (a) Rs. 10,000 to 15,000
   (b) Rs. 16,000 to 20,000
   (c) Rs. 21,000 to 25,000
   (d) Rs. 26,000 to 30,000

5. Marital status
    (a) Single
    (b) Married
    (c) Divorced / Separated
    (d) Widow / Widower
6. Place of Residence
    (a) Urban
    (b) Rural
7. Year of Service
    (a) 1 to 8 years
    (b) 9 to 16 years
    (c) 17 to 24 years
    (d) 25 to 32 years

Part : II

MODIFIED POLICE STRESS SCALE

Read all the following statement given below and selected the appropriate score according to the stress you experience on each item put (✓) mark on appropriate column.

S. No	Content	1	2	3	4	5
1	Shift work					
2	Working alone at night					
3	Over – time demands					
4	Risk of being injured on the job					
5	Work related activities on days off (e.g. court, community events)					
6	Traumatic events (e.g. MVA, domestics, death, Injury)					
7	Managing your social life outside of work					
8	Not enough time available to spend with friends and family					
9	Paper work					
10	Eating healthy at work					
11	Finding time to say in good physical condition					
12	Fatigue (e.g. shift work, over –time)					

13	Occupation – related health issues (e.g. back pain)					
14	Lack of understanding from family and friends about your work					
15	Making friends outside the job					
16	Upholding a “higher image” in public					
17	Negative comments from the public					
18	Limitations to your social life (e.g. who your friends are, where you socialize)					
19	Feeling like you are always on the job					
20	Friends / family feel the effects of the stigma association with your job					

Scoring Interpretation

1 – No stress

2 – Mild

3 – Moderate

4 - Severe

5 – Very Severe

No stress - 1 – 20

Mild Stress - 21 – 40

Moderate Stress - 41 – 60

Severe Stress - 61 – 80

Very Severe Stress - 81 – 100

TÏ§ : ı

úSoLôQpT¥Ym

¸rLiP ®]ôdLû[LY]UôL Yô£jÕ RÏkR ®ûPûV N¬ (✓) ùNnVÜm

1. YVÕ
   (A) 20 - 30 YVÕ
   (B) 31 - 40 YVÕ
   (C) 41 - 50 YVÕ
   (D) 51 YV§tÏ úUp
2. C]m
   (A) Bi
   (B) ùTi
3. T¥l× ¨ûX
   (A) BWmT ¨ûXT¥l×
   (B) CûP¨ûXT¥l×
   (C) ThPlT¥l×
   (D) úUp ThPlT¥l×
4. UôR YÚUô]m
   (A) ì. 10000 - 15000 YûW
   (B) ì. 16000 - 20000 YûW
   (C) ì. 21000 - 25000 YûW
   (D) ì. 26000 - 30000 YûW
5. §ÚUQ Øû\

(A) §ÚUQm BLôRYo

(B) §ÚUQm B]Yo

(C) ®YôLWjÕ B]Yo

(D) ®RûY

6. CÚl©Pm

(A) ¡WôUm

(B) SLWm

7. úYûX TôodÏm YÚPm

(A) 1 ØRp 8 YÚPm

(B) 9 ØRp 16 YÚPm

(C) 17 ØRp 24 YÚPm

(D) 25 ØRp 32 YÚPm

TÏ§ : II

LôYXoL°u U] AÝjR A[Ü úLôp

¸úZ ùLôÓdLlThÓs[Aû]jÕ ©uYÚm A±dûLûV Yô£jÕ ùTôÚjRUô] U§lÀhûP ¿eLs AàT®jR Uà AÝjRj§u A¥lTûP«p úRoÜ ùNnÕ N¬ (✓)úTôPÜm

Y Gi	Es[PdLm	1	2	3	4	5
1	úYûX úSWj§p Uôt\m					
2	CW®p R²VôL úYûX					
3	A§L úSWd úLô¬dûLLs					
4	T¦«p CÚdÏmúTôÕ LôVØßRp					
5	®ÓØû\ SôhL°p úYûX ùRôPo×ûPV SPY¥dûLLs (G.Lô) ¿§Uu\m, NêL ¨LrÜLs					
6	A§of£LWUô] ¨LrÜLs (G.Lô) ÅhPôo UWQm, LôVm					
7	EeLs úYûX«u ùY°«ÚkÕ NØL YôrdûLûV ¨oY¡lTÕ					
8	SiToLs Utßm ÏÓmTjÕPu ùNX®P úTôÕUô] úSWm ¡ûPdL®pûX.					
9	Lô¡R úYûX					
10	úYûX«p CÚdÏm úTôÕ BúWôd¡VUô] EQûY EiTÕ.					
11	SpX EPp ¨ûX«p CÚdL úSWm LiP±Rp.					
12	úNôoÜ (G.Lô) úYûX úSWj§p Uôt\m, A§L úSWm					

13	ùRô¯p - ÑLôRôW ©WfNû]Ls (G.Lô) ØÕÏ Y					
14	ÏÓmTm Utßm SiToLs EeLs úYûX Tt± ×¬kÕ ùLôs[ôûU					
15	úYûX«u ùY°«ÚkÕ SiToLs úNolTÕ					
16	ùTôÕ CPeL°p EVokR BÞûUûV ©uTtßYÕ					
17	ùTôÕ UdL°Pm CÚkÕ G§oUû\Vô] LÚjÕLs					
18	EeLs NêL YôrdûL«u YWm×Ls (G.Lô) Vôo EeLs SiToLs, GeúL ¿eLs TZL					
19	¿eLs úYûX«p GlúTôÕm CÚlTÕ úTôp EQoYÕ					
20	úYûX«p Es[L[eL§u ®û[ÜLû[SiToLs, ÏÓmTj§u EQÚYÕ.					

úLôp ®[dLm :

1 - U] AÝjRm CpûX

2 - úXNô]

3 - ªRUô]

4 - LÓûUVô]

5 - ªL LÓûUVô]

U] AÝjRm CpûX	1 - 20
úXNô] U] AÝjRm	21 - 40
ªRUô] U] AÝjRm	41 - 60

LÓûUVô] U] AÝjRm 61 - 80

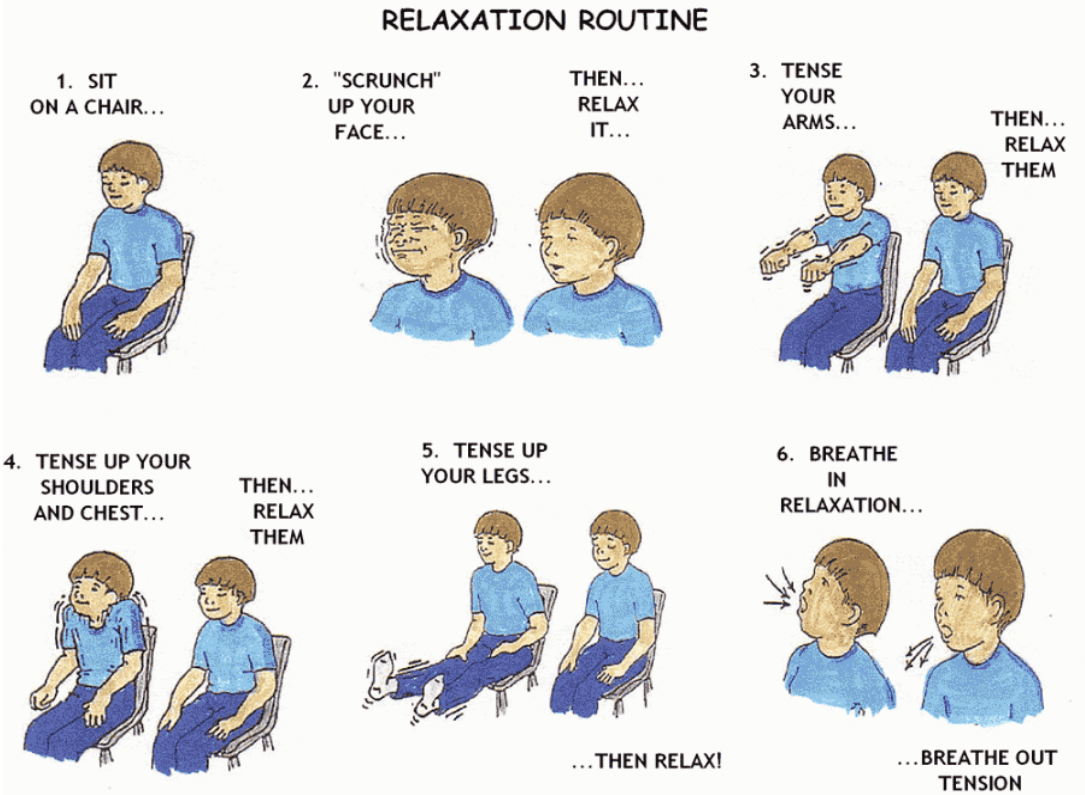
ªL LÓûUVô] U] AÝjRU 81 - 100

APPENDICES: H

INTERVENTION

JACOBSON PROGRESSIVE MUSCLE RELAXATION TECHNIQUE

Progressive muscle relaxation is a technique that involves tensing specific muscle groups and then relaxing them to create awareness of tension and relaxation. It is termed progressive because it proceeds through all major muscle groups, relaxing them one at a time, and eventually leads to total muscle relaxation.



Step 1 : Assume a comfortable position. You may lie down; loosen any tight clothing, close your eyes and be quiet.

Step 2 : Assume a passive attitude. Focus on yourself and on achieving relaxation in specific body muscles. Tune out all other thoughts.

Step 3 : Tense and relax each muscle groups as follows:

- Forehead – Wrinkle your forehead, try to make your eyebrows touch your hairline for five seconds. Relax.
- Eyes and nose – Close your eyes as tightly as you can for five seconds. Relax.
- Lips, cheeks and jaw – draw the centers of your mouth back and grimace for five seconds. Relax. Feel the warmth and calmness in your face.
- Hands – Extend your arms in front of you. Clench your fists tightly for five seconds. Relax. Feel the warmth and calmness in your hands.
- Forearms – Extend your arms out against an invisible wall and push forward with your hands for five seconds. Relax.
- Upper arms – Bend your elbows. Tense your biceps for five seconds. Relax. Feel the tension leave your arms.
- Shoulders – Shrug your shoulders up to your ears for five seconds. Relax.
- Back – Arch your back off the floor for five seconds. Relax. Feel the anxiety and tension disappearing.
- Stomach – Tighten your stomach muscles for five seconds. Relax.
- Hips and buttocks – Tighten your hip and buttock muscles for five seconds. Relax.
- Thighs – Tighten your thigh muscles by pressing your legs together as tightly as you can for five seconds. Relax.
- Feet – Bend your ankles toward your body as far you can for five seconds. Relax.
- Toes – Curl your toes as tightly as you can for five seconds. Relax.

Step 4 : Focus on any muscles which may still be tense. If any muscle remains tense, tighten and relax that specific muscle for three or four times.

Step 5 : Fix the feeling of relaxation in your mind. Resolve to repeat the process again.

Remember, people respond differently to various activities. Some feel pleasant or refreshed, and others feel calm and relaxed after an activity like this one. Some people notice little change the first time, but with practice, their control increases – as well as the benefits. If you practice this activity, your relaxation should increase.